PATENT COOPERATION TREATY

PCT/EP2003/003107

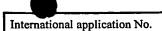
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1143-PCT/PL		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No.	International filing date (day/mo	onth/year) Priority date (day/month/year)
PCT/EP2003/003107	26 March 2003 (26.03)	.2003) 08 April 2002 (08.04.2002)
International Patent Classification (IPC) or n H02P 6/16	national classification and IPC	
Applicant D	PR.JOHANNES HEIDENH	AIN GMBH
This international preliminary exam and is transmitted to the applicant a	nination report has been prepared coording to Article 36.	by this International Preliminary Examining Authority
2. This REPORT consists of a total of	4 sheets, including	g this cover sheet.
amended and are the basis for 70.16 and Section 607 of the	or this report and/or sheets contain Administrative Instructions unde	the description, claims and/or drawings which have been ning rectifications made before this Authority (see Rule er the PCT).
These annexes consist of a to	otal of 3 sheets.	
3. This report contains indications rela	ating to the following items:	·
I Basis of the report		
II Priority		1
- 	of opinion with regard to novelty	, inventive step and industrial applicability
Totale of smith of inv		•
Reasoned statemen	t under Article 35(2) with regard	to novelty, inventive step or industrial applicability;
v Citations and explai	nations supporting such statement	
VI Certain documents	cited	
VII Certain defects in t	he international application	
VIII Certain observation	ns on the international application	ı
Date of submission of the demand	Date of	f completion of this report
27 August 2003 (27.08	3.2003)	14 July 2004 (14.07.2004)
Name and mailing address of the IPEA/EP	Author	rized officer
Facsimile No.	Telepho	one No.

Translation.



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I. Basi	of the re	port	
1. With	regard to	the elements of the international application:*	
	the inte	mational application as originally filed	
	the desc	pription:	
	pages	1-7	, as originally filed
Ì	pages		, filed with the demand
	pages	, filed with the letter of	
	the clair		
			, as originally filed
1	pages pages	, as amended (together	
	pages		, filed with the demand
	pages	2-9/1 , filed with the letter of	14 Jun 2004/06 March 2004
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	the drav	1 (0.0 (0.0	, as originally filed
	pages	1/2-2/2	, filed with the demand
	pages	C1 1 21 th 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	pages	, filed with the letter of	
	•	nce listing part of the description:	
	pages		, as originally filed
	pages		, filed with the demand
	pages	, filed with the letter of	
the	internation ese elemen		which is:
▎⊨	7	guage of a translation furnished for the purposes of international search (under Ru	ile 23.1(b)).
-	_	guage of publication of the international application (under Rule 48.3(b)).	
	or 55.3		
3. Wi	th regard liminary e	to any nucleotide and/or amino acid sequence disclosed in the internation was carried out on the basis of the sequence listing:	tional application, the international
	contain	ned in the international application in written form.	
	filed to	ogether with the international application in computer readable form.	
	furnisl	ned subsequently to this Authority in written form.	
	=	ned subsequently to this Authority in computer readable form.	
		tatement that the subsequently furnished written sequence listing does not ational application as filed has been furnished.	t go beyond the disclosure in the
	_	tatement that the information recorded in computer readable form is identical turnished.	to the written sequence listing has
4.	The ar	nendments have resulted in the cancellation of:	
		the description, pages	
		the claims, Nos.	
1		the drawings, sheets/fig	
5.	This re	port has been established as if (some of) the amendments had not been made, so the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**	ince they have been considered to go
in	placement this report 170.17).	sheets which have been furnished to the receiving Office in response to an invit t as "originally filed" and are not annexed to this report since they do n	ation under Article 14 are referred to ot contain amendments (Rule 70.16
	•	nent sheet containing such amendments must be referred to under item $\it I$ and annu	exed to this report.

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I ational	application No.
PCT/EP	03/03107

Statement			
Novelty (N)	Claims	1-9	YES
	Claims		NO
Inventive step (IS)	Claims	1-9	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-9	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following document:

D1: XP000617549, "A PROCEDURE TO ESTIMATE THE ABSOLUTE POSITION OF THE ROTOR FLUX OF A PERMANENT MAGNET SYNCHRONOUS MACHINE", EUROPEAN CONFERENCE ON POWER ELECTRONICS AND APPLICATIONS, 1991 (BACKHAUS; REINOLD; KALKER).

Subject

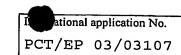
The application relates to a method for determining the position of the rotor in a synchronous motor.

Distinguishing technical features

Document D1 is considered to be the closest prior art. Said document describes a method for determining the position of the rotor in a synchronous motor, a plurality of current vectors being applied in different directions to the synchronous motor, and the current vector value required for achieving a predetermined rotor offset being established. The position of the rotor is calculated from at least one angular position of the current vector,

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at which the value of the current vector required to achieve the predetermined rotor offset is lowest.

The application contains two independent claims that differ from the prior art by virtue of the following features:

- the motor is stopped;
- once the current vector is no longer applied, the rotor returns to its starting position.

In consequence, claims 1-9 are novel.

Problem of interest

The rotor position can be determined by means of the features of claims 1 and 9, all the movements being controlled.

In consequence, claims 1-9 are inventive.